

HEALTH SERVICES DEPARTMENT ENVIRONMENTAL HEALTH DIVISION
Our mission is to promote and protect the health of the people of Lake County through education and the enforcement of public health laws

RETAIL FOOD FACILITY PLAN CHECK GUIDE



**COUNTY OF LAKE - DIVISION ENVIRONMENTAL HEALTH
(PLAN CHECK PROGRAM)**

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CONSTRUCTION REQUIREMENTS FOR RETAIL FOOD FACILITIES:

I. OVERVIEW:

This guideline is based on requirements found in the California Retail Food Code (CRFC or Cal Code), Part 7 of the California Health and Safety Code. Please refer to the California Retail Food Code for additional requirements and details. The codes are referenced throughout this document to indicate the sections where the requirements can be found in law.

All applicable requirements must be reflected in the plans submitted. Recommendations are included to give examples of methods which may be used for meeting the intent of the law, but may not apply in all circumstances.

Additionally, this guideline only encompasses the **health aspects** of construction and should not be construed to include requirements of other agencies involved, such as the local planning and zoning departments, the local building department authority or local fire department. Contact the appropriate local agencies involved to obtain any permits and/or to clarify other local codes and requirements.

II. DEFINITIONS:

A RETAIL FOOD FACILITY is a place where food is stored, prepared, served, packaged, transported, or otherwise handled for dispensing or sale directly to the consumer. This includes, but is not limited to, liquor stores, bakeries, grocery stores, meat markets, restaurants, cocktail lounges, soda fountains, coffee shops, vitamin stores, food or herbal supplement stores, food salvagers, food banks, vending machines (operating from a commissary), caterers, employee in-plant feeding operations (cafeterias), food market retail in association with custom slaughterers. California Retail Food Code (CRFC) – 113789

NEW CONSTRUCTION is a building or structure being constructed for the purpose of operating as a retail food facility whose previous use was not the operation of a food facility.

A REMODEL is a construction, building or repair to a permitted food facility and holds a current valid annual Permit to Operate, and requires a permit from the local building department authority. It shall involve but is not limited to structural alterations and the replacement, addition or significant modification of an integral piece of equipment and fixtures. Any change of operation or use of food facility which warrants the addition of fixtures or equipment will be considered new construction.

A PLAN CHECK SITE INSPECTION is a field inspection that determines if a food facility meets the current Health Code requirements or if plans would be required to be submitted to Plan Check for review and approval.

III. WHO SHOULD SUBMIT PLANS:

- a) A person who is constructing or remodeling any building for use as a food facility.
- b) A person who plans to open an existing food facility wherein the equipment has been removed or is being replaced.
- c) A person who plans to change the operation of a food facility, e.g. changing the operation from a limited menu to a full service operation.

HOW LONG DOES THE PLAN REVIEW PROCESS TAKE:

Plans and specifications are handled on a first come, first serve basis. It is important that you allow time for the plan review process before construction. Plan reviews are completed within twenty (20) working days or less (depending on workload), after the receipt of payment and plan submittal.

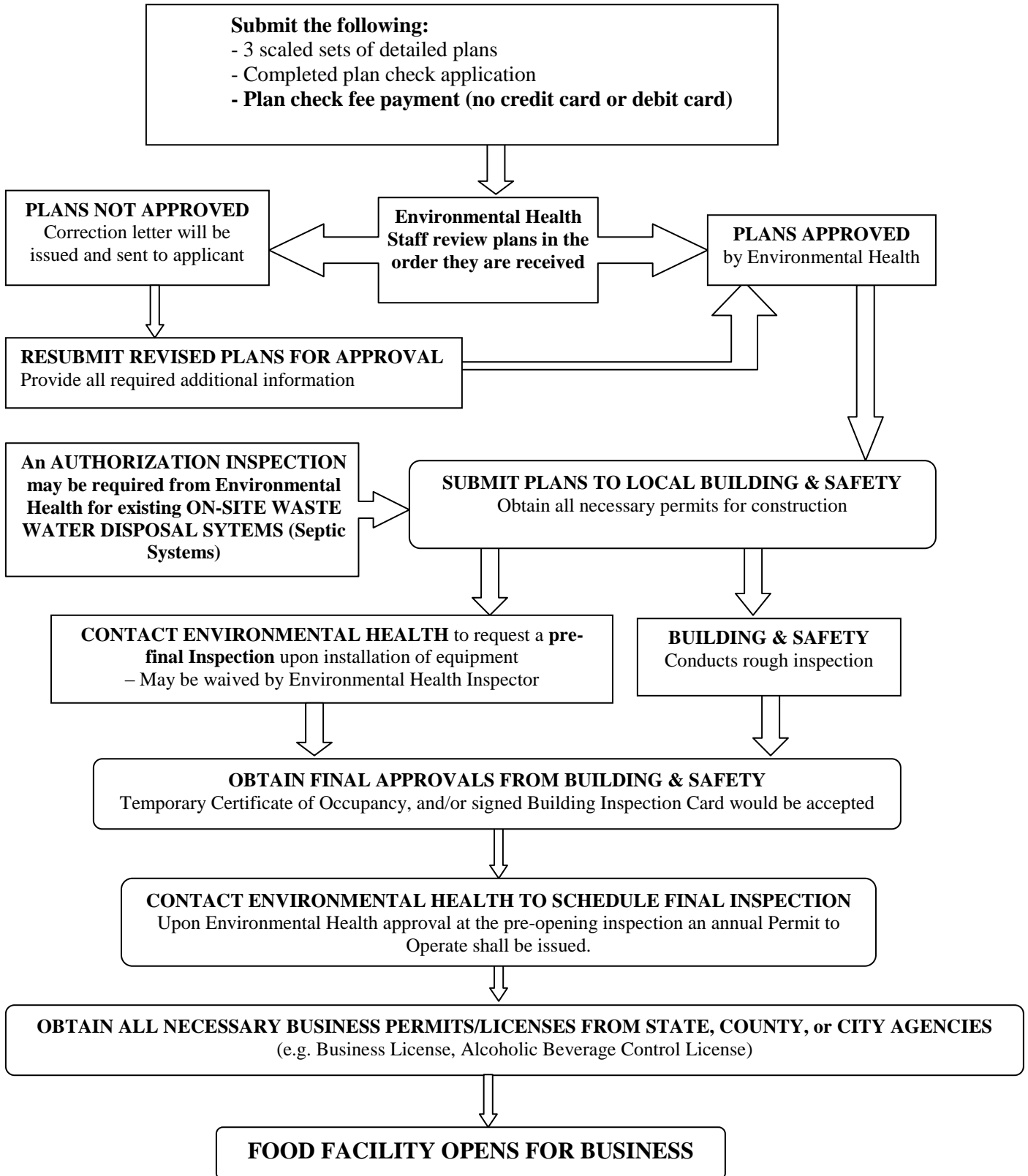
Before commencing construction, approvals must be obtained from the Environmental Health Division, the local building department, and any other applicable authorities. If any changes to the approved plans become necessary, revised plans shall be submitted for review and approval prior to construction.

IV. CONSTRUCTION PLAN APPROVAL PROCEDURE:

Before you begin constructing, enlarging, altering or converting any building for use as a food facility, adhere to the following procedure: (See flow chart on page 7.)

1. Consult with Environmental Health regarding your plan check.
2. Submit three (3) scaled sets of detailed construction and equipment installation plans for review and approval by Environmental Health. Plans may be prepared by an architect, draftsman, designer, contractor or owner. Plans must be concise, detailed, clear and drawn in a professional manner. (See Appendix B and C)
3. Plans that are incomplete or that require corrections may be returned for revision or a corrections letter will sent. All revisions must be completed prior to plan approval.
4. After Environmental Health has approved your plans, you will need to submit plans to the local building department for review and approval for construction. Any new construction, alteration, or remodeling shall be in accordance with all applicable local building codes.
5. Maintain a copy of the approved plans on the job site until the final inspection is completed and a Health Permit is issued.
6. Install equipment and fixtures according to the environmental health approved plans and requirements. Purchase only American National Standards Institute (ANSI) certified food related equipment and utensils.
7. Any revisions to the original approved plans shall be submitted to Environmental Health for additional review and approval.
8. Schedule a final inspection with Environmental Health to obtain an annual Permit to Operate. **All construction and equipment installation shall be subject to field inspection for approval.** Contact Environmental Health at least five (5) days in advance for a final inspection.

PLAN CHECK FLOW CHART



CONSTRUCTION PLAN SUBMITTAL REQUIREMENTS:

The proper layout and construction of a food facility is an important element in a successful and profitable business. It assures that you will meet all structural and operational requirements of the applicable health laws and, at the same time, meet the objective of serving safe and wholesome food to the public. **The intent of this guideline is to assist you in meeting these goals.**

Plans shall be easily readable, drawn to scale, (minimum scale $\frac{1}{4}'' = 1'$) and shall include:

1. Complete floor plan with plumbing, electrical, lighting and equipment details. Demolition plans may be required for the proposed remodel of an existing food facility.
2. Complete mechanical exhaust ventilation worksheet including make-up air. Indicate the type of comfort cooling in the building, e.g. "building is cooled by refrigerated air conditioning," "evaporative cooling," or "no cooling system is installed." (See Appendix A)
3. Finish schedule for floors, walls, and ceilings that indicate the type of material, the surface finish, the color, and the type of coved base at the floor-wall juncture. (See Appendix D)
4. A site plan including proposed waste storage receptacle/dumpster location. (If applicable, specify location of common use restrooms, janitorial facilities and the On-site Management office.)
5. Copy of hot water capacity calculations. (See Appendix F)
6. Equipment, (make and model), manufacturer's specification sheets may be required for plan review and approval.
7. Copy of the proposed menu.

NOTE: Additional equipment and construction information may be obtained at the following web site - www.ccdeh.com.

V. CONSTRUCTION DETAIL REQUIREMENTS:

The plans shall show and specify in detail the following:

1. **FULL ENCLOSURE:** Each permanent food facility shall be fully enclosed in a building consisting of permanent floors, walls, and an overhead structure that meet the minimum standards as prescribed by this part. Food facilities that are not fully enclosed on all sides and that are in operation on January 1, 1985, shall not be

required to meet the requirements of this section until the facility is remodeled or has a significant change in menu or its method of operation. CRFC - 114266

2. FLOORS: The floor surfaces in all areas (except in sales and dining areas) where food is prepared, prepackaged, or stored, employee change rooms, where any utensil is washed, where refuse or garbage is stored, where janitorial facilities are located, and in all toilet and hand washing areas, shall be smooth and of durable construction and nonabsorbent material that is easily cleanable, impervious to water, grease and acid (e.g. quarry tile or troweled epoxy, approved commercial grade sheet vinyl or other approved materials). **Painted floor surfaces are not acceptable.** CRFC - 114268

These floor surfaces shall be coved at the juncture of the floor and wall with a three-eighths inch (3/8") minimum radius coving and shall extend up the wall at least four inches (4"), except topset or in areas where food is stored only in unopened bottles, cans, cartons, sacks, or other original shipping containers. **Vinyl top set cove base is not acceptable.** (See Appendix E for illustrations)

Approved anti-slip floor finishes or materials are ONLY acceptable in areas where necessary for safety reasons, such as traffic areas.

Floor Drains shall be installed in floors that are water-flushed for cleaning and in areas where pressure spray methods for cleaning equipment are used. Floor surfaces in these areas shall be sloped 1:50, approximately one-quarter inch (1/4") per foot toward the floor drains. When floor drains are added to an existing facility where the floor surface is not sloped, a two (2) foot surrounding depression/slope to the floor drain may be required. CRFC – 114269 (a) and (b)

3. WALL & CEILINGS: The walls and ceilings of all rooms shall be of a durable, smooth, non-absorbent, easily cleanable surface except in the following areas:

- (a) bar areas in which alcoholic beverages are sold or served directly to the consumers, except wall areas adjacent to bar sinks and areas where food is prepared;
- (b) areas where food is stored only in unopened bottles, cans, cartons, sacks, or other original shipping containers;
- (c) dining and sales areas;
- (d) offices;
- (e) restrooms used exclusively by the consumers, except that the walls and ceilings shall be of a nonabsorbent and washable surface. Acceptable materials are gloss or semi-gloss enamel paint, epoxy paint, FRP (Fiberglass Reinforced Panel), stainless steel, ceramic tile or other approved materials and

finishes. Acoustical ceiling tile may be used if it is installed not less than six feet above the floor. **Exposed brick, concrete block, rough concrete, rough plaster or textured gypsum boards are not acceptable.** A sample may be required for review. CRFC - 114271

Walls and ceilings of food preparation areas, restrooms, janitorial areas, utensil washing areas, and interior surfaces of walk-in refrigeration units are recommended to be light colored. Light color shall mean having a light reflectance value of 70 percent or greater.

Conduits of all types shall be installed within walls as practicable. When otherwise installed, they shall be mounted or enclosed so as to facilitate cleaning (e.g., at least ½ inch from the wall and six (6) inches above the floor surface).

4. LIGHTING: In every room and area in which food is prepared, processed or packaged, or in which utensils are cleaned, sufficient natural or artificial lighting shall be provided to produce the following light intensity while the area is in use:

a) At least 10-foot candles (lm/ft² level of luminance) at a distance of 30 inches above the floor in walk-in refrigeration units and dry food storage areas.

b) At least 20-foot candles where food is provided for consumer self-service; where fresh produce or prepackaged foods are sold or offered for consumption; inside equipment such as reach-in and under-counter refrigerators; handwashing areas; warewashing areas; equipment and utensil storage areas; and in toilet rooms.

c) At least 50-foot candles at surfaces where a food employee is working with food or with utensils, equipment such as knives, slicers, grinders, or saws where employee safety is a factor; and in other rooms during periods of cleaning. CRFC - 114252

Light bulbs shall be shielded, coated, or otherwise shatter-resistant in areas where there are non-prepackaged ready-to-eat foods, clean equipment, utensils, and linens, or unwrapped single-use articles. CRFC – 114252.1

5. VENTILATION: Ventilation shall be provided to remove toxic gases, odor, steam, heat, grease, vapors, or smoke from the food facility including: food preparation, scullery, toilet, janitorial, garbage and change rooms. All areas of a food facility shall have sufficient ventilation to facilitate proper food storage and to provide a reasonable condition of comfort for each employee, consistent with the job performed by the employee. CRFC – 114149

Mechanical Exhaust Ventilation shall be provided over all cooking equipment such as ranges, multiple table top cooking units, broilers, fry grills, steam jacketed kettles, griddles, ovens, deep fat fryers, barbecues, rotisseries, high temperature warewash

machines (160°F rinse water), and similar equipment to effectively remove steam, heat, grease, vapors, cooking odors and smoke from the food facility.

Generally, chemical sanitizing or under-counter warewash machines do not require exhaust hoods. Ventilation plans for each system shall include front and side elevation of the exhaust hood and duct details to the roof fans (both exhaust and make-up air).

Provide manufacturer specification sheets for exhaust fan, make-up air fan and hood filters along with the static pressure calculations. Refer to *California Uniform Mechanical Code; Title 24, Part 4, Section 508.0, Hoods*. Specify the number and location(s) of make-up air diffusers. **An air balance report completed by a third party may be required prior to final clearance.** CRFC – 114149.1 (See Appendix A)

Toilet rooms shall be vented to the outside air by means of an operable (open and close) screened window, an air shaft, or a light-switch activated exhaust fan consistent with the requirements of local building codes. CRFC – 114149

6. FLIES, RODENT AND VERMIN EXCLUSION: A food facility shall at all times be constructed, equipped, maintained, and operated to prevent the entrance and harborage of animals, birds and vermin, including, but not limited to, rodents and insects. CRFC - 114259

Windows: All openable windows shall be provided with approved screening not less than 16 mesh per square inch set in tight fitting frames.

Pass-through window service openings shall be limited to 216 square inches each. Each opening shall be provided with a solid or screened window, equipped with a self-closing device. Screening shall be at least 16 mesh per square inch.

Pass-through windows up to 432 square inches are approved if equipped with an air curtain device. Window openings must be closed when not in use. The minimum distance between the openings shall not be less than eighteen inches (18"). CRFC-114259.2

Exterior Doors: Exterior doors leading to the outside shall be self-closing, tight-fitting and vermin proof. Air curtains may be used as auxiliary fly control but are **not** adequate substitute devices to permit a door to remain open.

Vector Control: Openings at the base and side of exterior doors shall not exceed one-fourth inch (1/4"). All exterior wall pipes or other openings shall be tightly sealed. All exterior wall vents shall be properly screened with one-fourth inch (1/4") hardware cloth screening.

Garbage and Trash Area: Each food facility shall be provided with facilities and equipment necessary to store or dispose of all waste material. An area designated for refuse, recyclables, returnables, and a redeeming machine for recyclables or returnables shall be located so that it is separate from food, equipment, utensils, linens, and single-service and single-use articles and a public health hazard or nuisance is not created. If located within the food facility, a storage area for refuse, recyclables, and returnables shall meet the requirements for floors, walls, ceilings, and vermin exclusion. If provided, an outdoor storage area or enclosure used for refuse, recyclables, and returnables shall be constructed of nonabsorbent material such as concrete or asphalt and shall be easily cleanable, durable, and sloped to drain (drain connected to sanitary sewer). CRFC – 114244, 114245, 114245.3, 114245.4

7. TOILET FACILITIES: Each permanent food facility shall be provided with clean toilet rooms, in good repair for the use by employees. The number of toilet and handicapped facilities required shall be in accordance with local building and plumbing ordinances. Toilet rooms shall be separated from other portions of the food facility by well-fitted, self-closing doors. Toilet tissue shall be provided in a permanently installed dispenser at each toilet. CRFC – 114250, 114276

Toilet facilities (at least one separate toilet facility for men and one separate toilet facility for women) in good repair shall be provided for consumers, guests, or invitees, when there is onsite consumption of FOODS or when the food facility was constructed after July 1, 1984, and has more than 20,000 square feet of floor space.

For any building that is constructed **after January 1, 2004**, that provides space for the consumption of food on the premises **shall provide clean toilet facilities** in good repair for consumers, guests or invitees. These facilities shall be located where consumers, guests, and invitees do not pass through food preparation, food storage, or utensil washing areas to reach the toilet facilities.

Food facilities located within amusement parks, stadiums, arenas, food courts, fairgrounds, and similar premises shall not be required to provide toilet facilities for employee use within each food facility if the following conditions are met:

- a. Approved common use toilet facilities are located within 200 feet in travel distance of each food facility
- b. Approved common use toilet facilities are readily available for use by employees
- c. The On-site Management office shall be staffed with personnel responsible for the maintenance of the designated common toilet facilities
- d. Prior approval must be obtained from Environmental Health

e. Approved common use toilet facilities shall be located in a common area that will not be accessible through another business

Handwashing facilities shall be provided within or adjacent to toilet rooms and shall be equipped with an adequate supply of hot and cold running water under pressure. Handwashing sinks shall have water provided from a combination or premixing faucet which supplies warm water (at least 100°Fahrenheit) for a minimum of fifteen (15) seconds while both hands are free for washing. The number of handwashing facilities required shall be in accordance with local building and plumbing ordinances. Handwashing cleanser and single-use sanitary towels or hot-air blowers shall be provided in permanently installed dispensers at all handwashing facilities.

8. EMPLOYEE CHANGING ROOM: Lockers or other suitable facilities shall be located in a designated room or area where contamination of food, equipment, utensils, linens, and single-use articles cannot occur. Dressing rooms or dressing areas shall be provided and used by employees if the employees regularly change their clothes in the facility. CRFC - 114256

9. EQUIPMENT STANDARD: All equipment shall be designed and constructed to be durable and to retain their characteristic qualities under normal use conditions. All new and replacement food-related and utensil-related equipment shall be certified or classified for sanitation by an American National Standards Institute (ANSI) accredited certification program. In the absence of an applicable sanitation certification, unique or special equipment may be evaluated for approval by the local enforcement agency. All materials that are used in the construction of utensils and food contact surfaces of equipment shall not allow the migration of deleterious substances or impart colors, odors, or tastes to food; and under normal use conditions shall be safe, durable, corrosion-resistant, nonabsorbent, sufficient in weight and thickness to withstand repeated washing, finished to have a smooth, easily cleanable surface, and resistant to pitting, chipping, crazing, scratching, scoring, distortion and decomposition. CRFC – 114130

Handwashing Sink: Food facilities constructed or extensively remodeled after January 1, 1996, that handle non-prepackaged food, shall provide facilities exclusively for handwashing in the food preparation areas **and** in warewashing areas that are not located within or immediately adjacent to food preparation areas. Handwashing facilities shall be sufficient in number and conveniently located, maintained clean, unobstructed and accessible at all times for use by food employees.

Handwashing sinks shall have water provided from a combination or premixing faucet which supplies warm water (at least 100°Fahrenheit) for a minimum of fifteen (15) seconds while both hands are free for washing. Handwashing facilities shall be provided with handwashing cleanser and sanitary single-use towels. CRFC – 113953

Food Preparation Sink: Food facilities are required to have a separate sink for when they are engaged in activities such as washing, rinsing, soaking, thawing, or similar preparation of foods, and shall be located within the food preparation area. The sink shall have an integral drainboard, and have minimum tub dimensions of 18" x 18" by 12" deep. An adjacent work table of similar dimensions may be substituted for the drainboard. A food preparation sink must drain indirectly through an air gap into a floor sink. CRFC – 114163

Manual Warewashing Sink: All food facilities, except those that have only prepackaged items in their original unopened sealed containers, shall provide a three-compartment warewashing sink with two integral drainboards. The tub compartments shall be large enough to accommodate immersion of the largest piece of equipment and utensils. The sink must be free standing (**not installed in cabinets**). Hot and cold running water under pressure shall be provided to each compartment. When the three-compartment sink is installed next to a wall, a metal "back splash" shall extend up the wall a minimum of eight (8) inches, and shall be formed as an integral part of the unit and sealed to the wall. The manual warewashing sink shall be easily accessible and conveniently located to the food preparation area. CRFC –114099

Bar Sink (Warewashing): A three (3) compartment bar sink (minimum 10" X 14" X 12") with two integral metal drainboards (minimum 18" x 14") shall be provided in bars.

Warewashing Machines (Dishwasher): Mechanical warewashing shall be accomplished by using an approved machine installed and operated in accordance with the manufacturer's specifications. Warewashing machines shall have two integral drainboards that are of adequate size and construction to accommodate the warewashing trays (i.e., 24" x 24").

Pot and pan washers shall be equipped with drainboards or shall be equipped with approved alternative equipment that provides adequate and suitable space for soiled and clean equipment and utensils.

NOTE: Installation of a mechanical warewashing machine does not eliminate the requirement for a 3-compartment sink. CRFC – 114101, 114103

Rinse/Work Sink: A single compartment rinse/work sink may be provided in service areas where blenders or similar equipment are rinsed and the three-compartment sink is not located within the area. **NOTE: Rinse/work sink will not be a substitute for the requirement of a 3-compartment sink.**

Dump Sink: A single compartment dump sink is generally installed in alcoholic beverage bars for the emptying of the contents of used pitchers and glasses.

Drainage Connection for Warewashing, Rinse/Work Sink, Dump Sink and Similar Type Equipment: Verify with the local building department for the proper connection of the drainage system to sewer. A direct connection will result in the requirement of an adjacent (within five feet) floor drain upstream of the warewashing equipment, as per the Uniform Plumbing Code Section 704.3.

Janitorial Sink: At least one (1) of the following is to be used for general cleaning purposes and for the disposal of mop bucket wastes and other liquid wastes:

- a. A one-compartment, non-porous janitorial sink.
- b. A slab, basin, or curbed cleaning facility constructed of concrete or equivalent material, and sloped to a drain.

Such facilities shall be connected to an approved sewerage, and provided with hot and cold running water through a mixing valve and protected with a backflow protection device.

A room, area, or cabinet separated from any food preparation, food storage area or warewashing area shall be provided for the storage of cleaning equipment and supplies, such as mops, buckets, brooms, cleansers and waxes. CRFC – 114279, 114281

Janitorial facilities shall not be required within each food facility if the following conditions are met:

- a. Approved common use janitorial facilities are located within 100 feet in travel distance of each food facility and shall be on same level as the food facility.
- b. Approved common use janitorial facilities are readily available for use by employees.
- c. The On-site Management office shall be staffed with personnel responsible for the maintenance of the designated common use janitorial facilities.
- d. Prior approval must be obtained from Environmental Health.
- e. Approved common use janitorial facilities shall be located in a common area that will not be accessible through another business.

Food and Equipment Protection: Nonprepackaged food on display and food contact surfaces shall be protected from contamination by the use of packaging, counter, service line, or sneeze guards that intercept a direct line between the consumer's mouth and the food being displayed, containers with tight-fitting securely attached lids, display cases, mechanical dispensers, or other effective means. Cafeteria, buffet and salad bar self-service, food preparation equipment and food

preparation areas shall be protected by approved sneeze guards. Nonprepackaged food may be displayed and sold in bulk on other than self-service containers if the food is served by a food employee directly to a consumer. CRFC – 113980, 114060

Equipment for cooling and heating food and for holding cold and hot food shall be sufficient in number and capacity to ensure proper food temperature control during transportation and operation. CRFC - 114153

Garbage Disposals: Garbage disposals may be installed in drainboards if the drainboard is lengthened to accommodate the disposal cone in addition to the minimum required drainboard size. **Garbage disposals may not be installed under a sink compartment, unless an additional compartment is provided for the disposal.** Verify with local building department requirements prior to installation of a garbage disposal.

Reach-In Refrigeration: Reach in refrigerators shall either be self-contained or drained indirectly to a floor sink. Refrigeration units shall be provided with an accurate, readily visible thermometer, have shelving that is nonabsorbent, non-corrodible, easily cleanable, and shall meet all applicable National Sanitation Foundation (NSF)/American National Standards Institute (ANSI) standards. **Wood is not an acceptable structural material finish of the refrigeration unit.** CRFC – 113885, 114130, 114193

Domestic type refrigeration units are not acceptable in food establishments.

Walk-In Refrigeration: Walk-in refrigerators shall have a well-fitted door, shall open into an approved area of the food facility, shall be constructed flush with the floor; coved base shall be provided at the intersection of floors and walls with a minimum 3/8" radius and 4" height; be flashed or sealed to walls and/or ceiling as needed to prevent rodent and vermin harborage; have non-corrodible shelving that is at least six (6) inches above the floor; shall be certified or classified for sanitation to applicable NSF/ANSI standards.

Wood and vinyl are not acceptable floor surfaces for walk-in units.

Condensate from refrigeration units shall be drained in a sanitary manner to a floor sink, or other approved device by an indirect connection. Plumbing waste receptors, including floor drains, floor sinks, and evaporators are to be located outside of refrigeration units. CRFC – 113885, 114130, 114193

INSTALLATION OF EQUIPMENT:

Floor Mounted: All equipment shall be either easily movable (e.g., on casters), elevated on legs that provide at least a six inch (6") clearance between the floor and the equipment, or sealed to minimum four inch (4") solid masonry island with minimum three-eighths inch (3/8") coved radius. If on an island, it shall overhang the

base at least two inches (2"), but not more than the height of the island. Sealing to the floor is acceptable only if no other means are available, such as beer coolers behind bars, and large bakery ovens. CRFC - 114169

Table-Mounted: Table-mounted equipment that is not easily movable shall be installed to allow cleaning of the equipment and areas underneath and around the equipment by being sealed to the table or elevated on legs that provide at least a four-inch clearance between the table and the equipment. Gaps and spaces between equipment base and top of islands shall be sealed with a non-hardening silicone sealant (sealant is flush with adjoining surfaces).

10. **STORAGE:** Adequate and suitable space shall be provided for the storage of food. Approximately twenty-five percent (25%) of the food preparation area and at least 96 lineal feet of approved shelving for each 100 square feet of required storage area is considered adequate (excluding refrigeration). Adequate storage generally means a minimum of 96 linear feet of 18" deep shelving. Each food facility will be evaluated on a case by case basis. If pallets are to be used, pallet jacks or forklifts should be available for ease in movement. Shelving is to be constructed so as to be easily cleanable.

Shelves installed on a wall shall have at least a one inch (1") open space between the back edge of the shelf or be sealed to the wall with silicone sealant or equivalent. The lowest shelf shall be at least six inches (6") above the floor with a clear, unobstructed area below. All shelves supported by legs on the floor must be in compliance with applicable NSF/ANSI standards. CRFC – 114047

11. **PLUMBING, GAS AND ELECTRIC:** All plumbing, plumbing fixtures, gas lines and gas operated equipment shall be installed in compliance with local plumbing ordinances. They shall be maintained so as to prevent any contamination; shall be kept clean; shall be fully operative, and shall be in good repair. All liquid wastes shall be disposed of through the plumbing system which shall discharge into the public sewerage or into an approved private sewage disposal system. CRFC – 114190

All steam tables, ice machines and bins, food preparation sinks, warewashing sinks, display cases, walk-in refrigerators, dipper wells for scooping ice cream and other similar equipment that discharge liquid waste shall be drained by means of indirect waste pipes, and all wastes drained by them shall discharge through an air gap into a floor sink or other approved type of receptor. Waste lines shall not cross any aisle, traffic area, or door opening. CRFC – 114193

Dipper wells plumbed with cold running water shall be provided for ice cream dipping cabinet or other similar scooping operations.

Per the Uniform Plumbing Code, Section 704.3, a floor drain shall be provided adjacent to the fixture, and the fixture shall be connected on the sewer side of the floor drain trap, provided that no other drainage line is connected between the floor drain waste connection and the fixture drain. Contact the local Building department for further information.

ELECTRIC SUPPLY: Electrical power shall be supplied at all times to operate the food facility. All electrical features and accessories shall be installed in compliance with the applicable local electrical ordinances. CRFC – 114182 (**Generators will only be allowed as a back up power source in the event of an emergency, i.e. power outage**).

WATER SUPPLY: An adequate, protected, pressurized, potable supply of hot water at least 49°Celsius (120°Fahrenheit) measured from the faucet and cold running water shall be provided from an approved source. The potable water supply shall be protected with a backflow or back-siphon device, as required by applicable local plumbing codes.

Each food facility shall be provided with its own dedicated water heater. Hot water generation and distribution systems shall be sufficient to meet the peak hot water demands throughout the food facility. Where fixtures are located more than sixty feet (60') from the water heater, a recirculation pump must be installed. CRFC – 114192, 114195

In sizing the water heater, the peak hourly demands for all sinks, warewashing machines, etc., are added together to determine the minimum required recovery rate. (See Appendix F)

SEWAGE DISPOSAL, GREASE TRAPS AND INTERCEPTORS: A grease trap or grease interceptor shall not be located in a food or utensil handling area unless specifically approved by the enforcement agency; and shall be easily accessible for servicing. Contact the local Building Department, Sanitary/Special Districts, or Public Works agencies for information or regulations regarding special sewerage, grease trap and grease interceptor requirements. CRFC – 114190, 114201

Contact Environmental Health regarding ON-SITE WASTEWATER DISPOSAL SYSTEMS such as septic or supplemental treatment unit applications and projected increased wastewater flows.

VI. FINAL REQUIREMENTS:

Prior to commencement of any construction, alteration or installation of any equipment, make sure your plans are approved by all applicable agencies.

Any modifications not previously approved by Environmental Health must be disclosed during the final inspection.

All construction and equipment installation are subject to on-site inspections. During the course of construction please call if you should have any questions.

Prior to calling for a final inspection and issuance of your annual Permit to Operate, Building Department as well as any other applicable local authorities must have given final approvals regarding construction completion.

Final inspections and approvals are required prior to beginning the operation of new food facilities, remodeled food facilities, or prior to utilizing any remodeled areas within existing food facilities. The inspector requires **FIVE (5) WORKING DAYS PRIOR NOTICE TO ARRANGE FOR A FINAL INSPECTION.**

IT IS A MISDEMEANOR VIOLATION TO BEGIN OPERATING WITHOUT A FINAL INSPECTION AND OBTAINING A VALID ANNUAL PERMIT TO OPERATE. PLEASE NOTE THAT IF YOU OPEN FOR BUSINESS PRIOR TO OBTAINING A PUBLIC HEALTH PERMIT, YOU WILL BE SUBJECT TO CLOSURE AND POSSIBLE FURTHER LEGAL ACTION.

NOTE: An annual Permit to Operate will not be issued to a portion of a food facility for the purpose of being subleased, rented or shared unless the portion will meet all the requirements of a permanent food facility.

All facilities are subject to construction inspections, routine, complaints, and random inspections thereafter, by the Division of Environmental Health. These inspections are intended to protect the health of the public as well as the well-being of the operator by ensuring that food facilities are operated in a clean and sanitary manner with all utensils and equipment being maintained operational and in good repair. CRFC – 114390

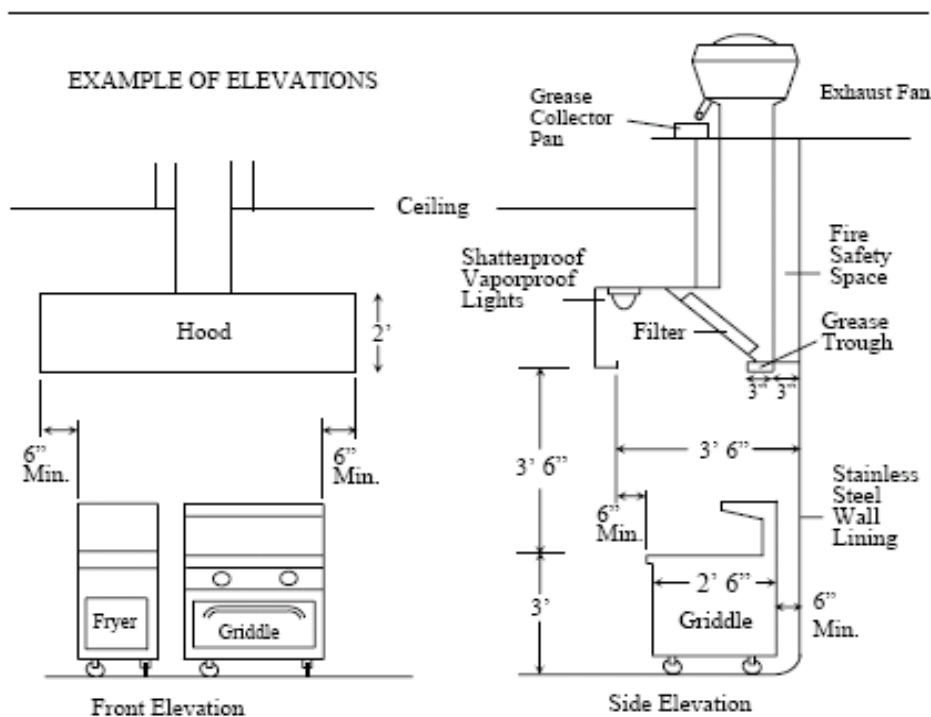
VII. APPENDIX SECTION:

APPENDIX A

COMMERCIAL HOODS/MECHANICAL EXHAUST DATA INFORMATION

Must comply with 2007 California Mechanical Code; CCR Title 24, Part 4, Chapter 5:

- Provide 3 sets of plans, ¼ inch per foot, containing:
 - HOOD WORKSHEET on the back of this page
 - Plan view:
 - Outline of hood over cooking equipment
 - Clearances around equipment & to walls
 - Exhaust & make-up air ducts
 - Exhaust & make-up air fans on roof
 - Make-up air diffusers on ceiling
 - Make & model numbers of equipment & fans
 - All dimensions of equipment & ducts
 - Front & side elevations showing:
 - Cooking equipment
 - Hood overhang
 - Duct elbows and fans
 - Type & gauge of metal used in hood & ducts
 - Specify if hood is Type I, Type II, UL Listed, non-canopy, compensating, etc.
 - Name, address & phone number of facility & hood designer
- Submit one set of cut-sheets (manufacturers' specification sheets) for:
 - Cooking equipment, Exhaust & Make-Up Air fans, UL Listing Card for hood system (if applicable)
- Plans must conform to California Mechanical Code
 - Air-Balance Test recommended

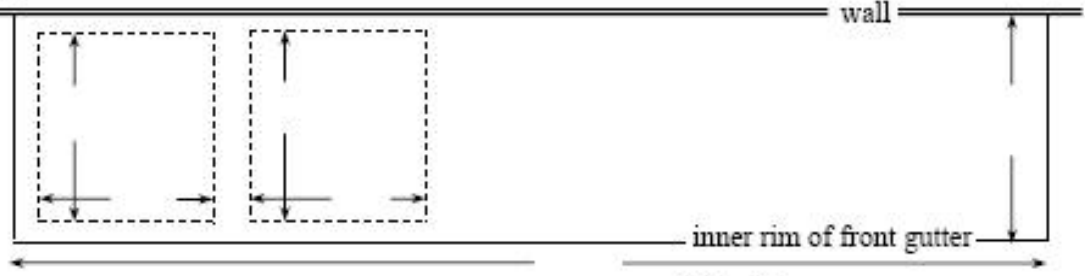


Facility Name: _____

Address: _____

COOKING EQUIPMENT & HOOD

- Fill in cooking equipment & hood dimensions in feet in overhead view.
- Casters & quick disconnects strongly recommended! Specified?



- Hood long enough to allow $\geq 6''$ on sides of equipment? yes__ no__
- Hood wide enough to allow $\geq 6''$ in front & back of equipment? yes__ no__
- Canopy lip $\geq 6.5'$ above floor & $\leq 4'$ above cooking surface? yes__ no__
- Canopy free of exposed horizontal electrical & Ansul lines? yes__ no__

yes__ no__
 yes__ no__
 yes__ no__
 yes__ no__

CFM

- What kind of hood? _____
- Hood opening: _____ ft x _____ ft = _____ sq ft x _____ Q factor from CMC = _____ CFM
 (length) (width)
- Other formula?: _____ = _____ CFM

FILTERS

- _____ " H x _____ " W _____ x _____ sq ft = _____ sq ft
 (Filter Size) (# of Filters) (usable area per filter) (total filter area)
- _____ CFM \div _____ sq ft (total filter area) = _____ fpm
- Baffle filter ideal fpm = 300; should be 250-350. Is it? yes__ no__
- Horizontal slot filter ideal fpm = 1000; should be 800-1200. Is it? yes__ no__ n.a.__
- Fpm can be < or > above if this is a "LISTED" hood. Is it? yes__ no__
- Total of filter widths (_____ ") must be < hood length. Is it? yes__ no__

DUCT

- Duct dimensions: _____ " x _____ " = _____ " \div 144 = _____ sq ft
- Hood > 12 ft. long shows > 1 exhaust outlet to main duct? yes__ no__ n.a.__
- _____ CFM \div _____ sq ft = _____ fpm
- Fpm should \approx 1800; must = 1500 - 2500 (Type I). Is it? yes__ no__ n.a.__

STATIC PRESSURE & EXHAUST FAN

- # of elbows = _____ Cleanout at each elbow? yes__ no__ n.a.__
- Static Pressure \approx _____ " SP
- Exhaust Fan: Make _____ Model # _____ H.P. _____
- UL 762 Restaurant Application specified for Type I? yes__ no__ Easily pulls CFM at SP? yes__ no__

MAKE-UP AIR

- _____ CFM \div 2000 CFM = _____ Next higher whole number = _____ Diffusers recommended
 (Exhaust) (max. per diffuser recommended)
- Make-up air Static Pressure \approx _____ " SP
- Make-up air fan: Make _____ Model # _____ H.P. _____
- Supplies 95-100% of exhaust CFM at SP? yes__ no__
- Make-up air on roof \geq 10 ft. from exhaust? yes__ no__
- Diffusers on ceiling \geq 10 ft. from hood? yes__ no__
- Exhaust & make-up air interlocked? yes__ no__

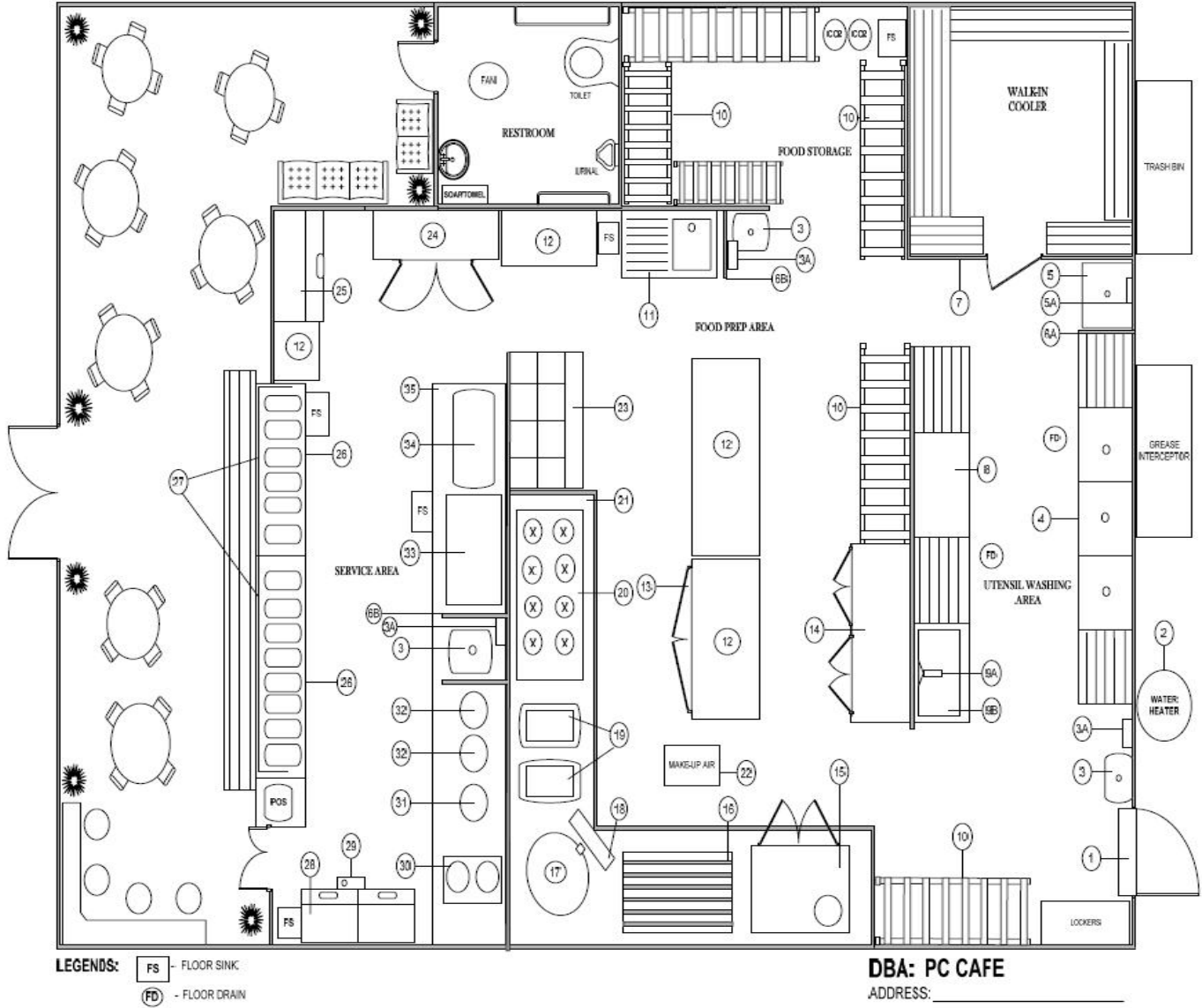
Prepared

by: _____ / / _____
 Name Phone # Company Date

APPENDIX B

SAMPLE FLOOR PLAN

NOT DRAWN TO SCALE



APPENDIX C

SAMPLE EQUIPMENT SCHEDULE

(Manufacturer's equipment "Specification Sheets" may be required upon request)

#	Equipment Name	Manufacturer Model No.	NSF/ANSI	Comments
1	Door Activated Air Curtain			1600 feet per minute (fpm)
2	Water Heater			Refer to "CCDEH Water Heater Sizing Guidelines"
3	(3) Handwashing Sink		x	Comply with UPC 704.3
3A	Soap and Towel Dispenser			
4	Manual Warewashing 3-Compartment Sink		x	Specify Size LxWxH
5	Mop Basin			Approved Backflow Prevention
6A	18" Stainless Steel Splashguard			
6B	6" Stainless Steel Splashguard			
7	Walk-in Cooler		x	
8	Low Temp. Mechanical Warewashing Machine		x	Comply with UPC 704.3
9A	Pre-rinse Faucet		x	
9B	Pre-rinse Sink		x	Comply with UPC 704.3
10	Metro Shelves		x	
11	Food Prep Sink		x	18" Drainboard Specify Size LxWxH
12	Food Pre Table		x	
13	2-Door Undercounter Refrigerator		x	Self Contained
14	4-Door Upright Freezer		x	Self Contained
15	Double Convection Oven		x	
16	Radiant Charbroiler		x	
17	Tilting Kettle		x	
18	Trench/trough Drain			
19	(2) Fryers		x	
20	8 Burner Stove		x	
21	Type 1 Hood		x	
22	Make-up Air			
23	Sandwich Prep Table		x	Self Contained
24	2-Door Upright Refrigerator		x	Self Contained
25	Ice Machine		x	
26	(2) Steam Table		x	
27	Sneeze Guard		x	
28	Dipping Cabinet		x	
29	Dipper Well		x	
30	Coffee Brewer		x	
31	Coffee Grinder		x	
32	(2) Blenders		x	
33	Soda Dispenser		x	
34	Espresso Machine		x	
35	Stainless Steel Counter		x	

APPENDIX D

FINISH SCHEDULE

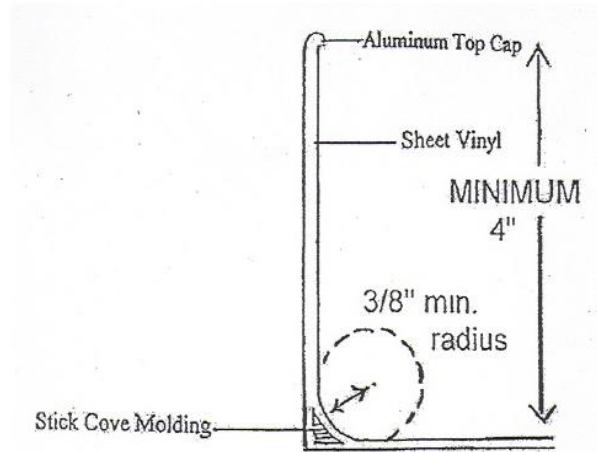
ROOM NAME	FLOOR	COVE BASE 3/8" RADIUS	WALLS	CEILING
Kitchen/Cooking Area	Quarry tile, poured seamless, sealed concrete	4" quarry tile	Stainless steel; aluminum; ceramic tile	Plastic coated or metal clad fiberboard; dry-wall epoxy, glazed surface; plastic laminate
Kitchen/Food Preparation Area	Same as above plus commercial grade vinyl composition tile	4" ceramic tile	Same as above plus approved wall panel (FRP) fiberglass reinforced polyester panel; epoxy painted dry wall; filled block with epoxy paint or glazed surface	Same as above
Bar	Same as above	4" quarry tile or ceramic tile	Same as above for areas behind sinks	Meets building codes
Food Storage Area	Same as above plus sealed concrete, commercial grade vinyl composition tile or sheets	4" ceramic tile	Approved wall panels (FRP) fiberglass reinforced polyester panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Acoustic tile; painted sheetrock
Other Storage	Same as above	Same as above	Painted sheetrock	Same as above
Toilet Room	Quarry tile; poured sealed concrete; commercial grade vinyl composition tile or sheets	Continuous up to the walls, at least 4" forming an integral 3/8" minimum radius cove base	Approved wall panels (FRP) fiberglass reinforced polyester panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Plastic coated or metal clad fiberboard; drywall with epoxy; glazed surface; plastic laminate
Dressing Rooms	Same as above		Painted sheetrock	Same as above plus painted sheetrock
Garbage & Refuse Areas (Interior)	Quarry tile; poured seamless, sealed concrete; commercial grade vinyl composition tile or sheets		Same as above	Same as above

ROOM NAME	FLOOR	COVE BASE 3/8" RADIUS	WALLS	CEILING
Mop Service Area	Quarry tile; poured seamless, sealed concrete	4" ceramic tile or quarry tile or continuous sealed concrete at 3/8" radius base coving	Approved wall panels (FRP) fiberglass reinforced polyester panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Plastic coated or metal clad fiberboard; drywall with epoxy; glazed surface; plastic laminate
Warewashing Area	Quarry tile; poured seamless, sealed concrete; commercial grade vinyl composition tile or sheets	Continuous smooth epoxy flooring 4" up to the wall	Approved wall panels (FRP) fiberglass reinforced polyester panel; epoxy painted drywall; filled block with epoxy paint or glazed surface	Plastic coated or metal clad fiberboard; drywall with epoxy; glazed surface; plastic laminate
Walk-In Refrigerators & Freezer	Quarry tile; stainless steel; poured sealed concrete; poured synthetic	6" stainless steel cove base	Aluminum; stainless steel; enamel coated steel (or other corrosion resistant material)	Aluminum; stainless steel; enamel coated steel (or other corrosion resistant material)

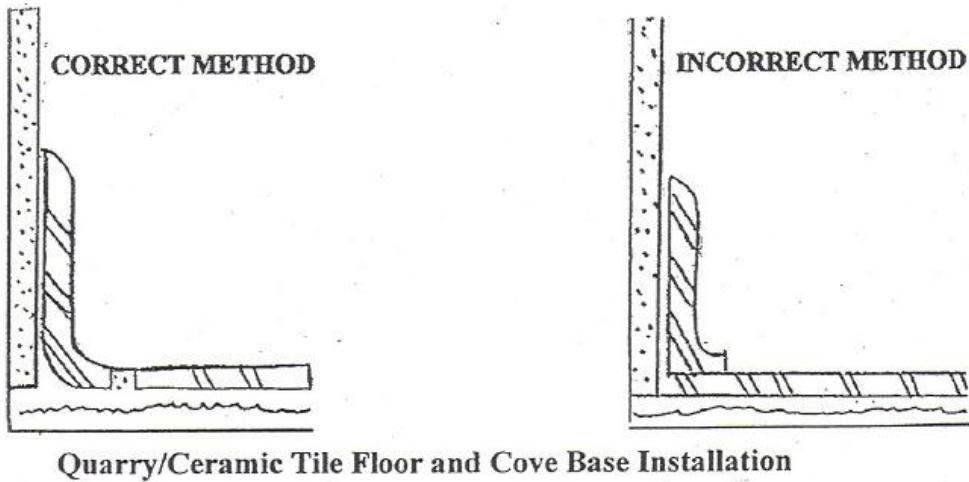
Notes:

1. All floor coverings in food preparation, food storage, utensil-washing areas, walk-in refrigeration units, dressing rooms, locker rooms, toilet rooms and vestibules must be smooth, non-absorbent, easily cleanable and durable. Anti-slip floor covering may be used in high traffic areas only.
2. Any alternate materials not listed in the above chart must be submitted for evaluation.
3. There must be coving at base junctures that is compatible to both wall and floor coverings; provide at least 3/8 inch radius and 4 inches in height.

APPENDIX E:
TYPICAL COVING AND FLOORING



Sheet Vinyl Installation
Cross Section View at Cove Base



APPENDIX F:

HOURLY HOT WATER DEMAND TABLE

FACILITY _____ DATE _____

ADDRESS _____

Fixtures	Dimensions	# of Units per Facility	Gallons per sink Section	×	# of Sections per Sink	=	Gallons per hour
Utensil Sinks	18"x18"	_____	14	×	3	=	
	24"x24"	_____	25	×	3	=	
Bar Sinks			6	×	3	=	
Handwash Sinks			5	×	1	=	
Pre Rinse Units	Hand Spray Type		45	×	1	=	
Clothes Washers	9-12lb	_____	45	×	1	=	
	16lb	_____	60	×		=	
Food Preparation Sinks			5	×	1	=	
Employee Shower			20	×	1	=	
Janitorial Sinks and Garbage			15	×	1	=	
Custom Fixtures							
Add up the gallons of water used by the above fixtures to determine the gallons per hour (GPH) needed							

Multiply GPH needed _____

By Sizing for facility type (use 1.0 or 0.6 or 0.4) × _____

Adjusted Total GPH = _____

FORMULA - ELECTRIC WATER HEATERS:

Adjusted Total GPH (_____) × 0.15 = _____ KW input required _____ KW (provided by the unit)

FORMULA - GAS WATER HEATERS :

Adjusted Total GPH (_____) × 660 = _____ BTU input required _____ BTU (provided by the unit)

SIZING REQUIREMENTS FOR STORAGE WATER HEATERS (Not instantaneous water heaters)

- Food facilities with multi service eating utensils, heavy use (serving 3 meals a day): 1.0 GPH
- Food facilities with multi service eating utensils, moderate use: 0.6 GPH
- Food facilities with only single-service eating utensils or don't use utensils at all: 0.4 GPH

Custom or other fixtures that use hot water: Refer to manufacturer's specifications for the equipment or NSF® listing. Calculate gallons per section using this formula: Length (ft.) X Width (ft.) X Depth (ft.) X 7.5 = gallons per section or compartment.

INSTANTANEOUS WATER HEATERS: Instantaneous water heaters are flow dependent. The higher the water flow, the lower the temperature output. Subtract the cold water temperature from the desired hot water temperature (120°F minimum) to get the required temperature rise.

Instantaneous hot water heaters must be sized to provide hot water at a rate of at least two gallons per minute (GPM) to each fixture. For example, a handwash sinks must receive at least ½ GPM. Six (6) GPM is generally the requirement for a small restaurant.

Note: 110 volt units are only good for hand sinks; 220 volt units can supply a few sinks in very small restaurants with no dishwasher (two units may be required). Gas units are required for most food facilities. An instantaneous water heater may be required exclusively for the warewashing machine. NSF listings can help to determine the minimum G.P.M. hot water demand for automatic dishwashers.

The following is an example:

1 Three-Compartment Sink:	2 GPM
1 Janitorial Sink	2 GPM
1 Food prep Sink	2 GPM
Handwash Sink (1/2 GPM x #)	1-2 GPM

Each facility will have at least two handwash sinks or more

Total = 7-8 GPM

Recirculation Pumps: Where fixtures are located more than sixty feet from the water heater, a recirculation pump must be installed. It may be more practical to install a separate, smaller water heater for remote fixtures, such as for restroom handsinks.